

Patent Claims:

1 1. A turbomachine or turbo-engine, particularly a gas turbine,
2 with a stator and a rotor, wherein the rotor comprises
3 rotor blades (21) and the stator comprises a housing (20)
4 and stationary guide vanes (17), wherein the guide vanes
5 (17) form guide vane rings (11, 12), which border with
6 radially outwardly positioned ends (18) on the housing and
7 with radially inwardly positioned ends on the rotor, and
8 wherein the guide vane rings are spoke-centered with the
9 aid of bearing journal pins or guide pins (24) allocated to
10 the housing (20) and passing through the housing (20),
11 characterized in that the guide pins (24) extend
12 approximately perpendicularly to the housing (20), and in
13 that ends (26) of the guide pins (24) reaching into the
14 housing engage fork-shaped elements (27) allocated to the
15 radially outwardly positioned ends (18) of the guide vane
16 rings (11, 12).

1 2. The turbo-engine of claim 1, characterized in that the
2 guide pins (24) extend approximately perpendicularly to the
3 housing and at a slant to the radial direction and to the
4 axial direction of the turbo-engine.

1 3. The turbo-engine of claim 1 or 2, characterized in that the
2 fork-shaped elements (27) are at least partly open in the
3 radial direction and the axial direction of the
4 turbo-engine.

1 4. The turbo-engine of one or more of the claims 1 to 3,
2 characterized in that the fork-shaped elements (27) are
3 allocated to an outer cover belt (19) of the guide vane
4 rings.

1 5. The turbo-engine of one or more of the claims 1 to 4,
2 characterized in that a plurality of fork-shaped elements
3 are positioned distributed around the circumference of a
4 guide vane ring (11, 12), whereby a plurality of guide pins
5 positioned distributed about the circumference of the
6 housing (20) engage in the fork-shaped elements.

1 6. The turbo-engine of one or more of the claims 1 to 5,
2 characterized in that seal carriers (28) are arranged
3 between the radially outwardly positioned ends (18) of the
4 guide vanes (17) of neighboring guide vane rings (11, 12).

1 7. The turbo-engine of claim 6, characterized in that the seal
2 carriers (28) are arranged between outer cover belts (19)
3 of neighboring guide vane rings (11, 12), whereby radially
4 outwardly positioned ends of rotor blades (21) cooperate
5 with sealing bodies (29) allocated to the seal
6 carriers (28).

1 8. The turbo-engine of claim 6 or 7, characterized in that the
2 guide vane rings (11, 12) and the seal carriers (28) are

3 spoke-centered with the aid of the guide pins (24) and/or
4 of the fork-shaped elements (27).

1 9. The turbo-engine of one or more of the claims 1 to 8,
2 characterized in that the fork-shaped elements (27) bound
3 at least two recesses (31, 32), whereby the guide pins (24)
4 engage a first recess (31) and whereby projections (33) of
5 the seal carriers (28) engage a second recess (32).

1 10. The turbo-engine of claim 9, characterized in that the
2 recesses (31, 32) of the fork-shaped elements (27) are
3 positioned next to each other in the circumferential
4 direction.

1 11. The turbo-engine of one or more of the claims 1 to 10,
2 characterized by at least one stop for limiting the axial
3 shiftability of the guide vane rings (11, 12).

1 12. The turbo-engine of claim 11, characterized in that the
2 stop is or stops are integrated into at least one of the
3 fork-shaped elements (27).

1 13. A mounting device for a turbo-engine of one or more of the
2 claims 1 to 12 for aligning or adjusting the guide pins
3 (24) which are oriented approximately perpendicularly to
4 the housing (20) and extend through the housing of the
5 turbo-engine, with a plate-shaped base body (36) and at
6 least two recesses integrated into the plate-shaped base

7 body, whereby for the alignment or adjustment of at least
8 two guide pins, the guide pin ends (26) reaching into the
9 housing extend respectively into a corresponding recess of
10 the mounting device (35) positioned on the inside (38) of
11 the housing, and whereby the guide pins, the ends of which
12 reach into the recesses of the mounting device, can be
13 tightened by nuts (34) positioned on the outside (39) of
14 the housing.

1 14. The mounting device of claim 13, characterized by a handle
2 (40) extending approximately perpendicularly to the
3 plate-shaped base body (36).

1 15. The mounting device of claim 13 or 14, characterized in
2 that the or each recess (37) is integrated into the
3 plate-shaped base body (36) in such a way that on the one
4 hand during the alignment or adjusting, the ends (26) of
5 the guide pins (24) reaching into the housing (20) pass
6 through the housing perpendicularly to a plane defined by
7 the plate-shaped base body, and that on the other hand,
8 following the alignment or adjustment, the mounting device
9 can be brought out of engagement, tangentially to the plane
10 defined by the plate-shaped base body, with the ends (26)
11 of the guide pins reaching into the housing (20).